

March 30, 1943

INSTRUCTOR'S PERIOD GUIDE
STATE AND LOCAL GAS SPECIALIST SCHOOLS
OCD Publication 2210

SAFEGUARDING INFORMATION

Location: Lecture room

Length of Period: 15 minutes

Texts: (Student)

- (1) Operations Letter No. 50
- (2) Operations Letter No. 68

Preparation for Period: None

Instructor's References:

- (1) Lecture notes
- (2) Operations Letter No. 50
- (3) Operations Letter No. 68
- (4) Training Circular No. 99, Safeguarding Military Information, December, 1941

NONPERSISTENT AGENTS

Location: Lecture room

Length of Period: 50 minutes

Texts: (Student)

- (1) Chemicals in War (Prentiss)
- (2) Gas Warfare (Waitt)
- (3) War Gases (Jacobs)

Preparation for Period: None

Instructor's References:

- (1) Chap. 3, TM 3-215, Military Chemistry and Chemical Agents
- (2) Sections I-V, TM 8-285, Treatment of Casualties from Chemical Agents
- (3) Par. 5-7, FM 21-40, Defense Against Chemical Attack
- (4) Par. 6-12, 14-15, Protection Against Gas
- (5) Part II, Chemicals in War (Prentiss)
- (6) Chapters III, VI, IX-XI, Gas Warfare (Waitt)
- (7) Pages 9-13, also Chapter II, A, 1-4; B, 6; B, II, 1-3, War Gases (Jacobs)

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PERSISTENT AGENTS

Location: Lecture room

Length of Period: 50 minutes

Texts: (Student)

- (1) Chemicals in War (Prentiss)
- (2) War Gases (Jacobs)
- (3) Gas Warfare (Waitt)

Preparation for Period: None

Instructor's References:

- (1) Chap. 3, TM 3-215
- (2) Sections I-IV, TM 8-285
- (3) Par. 5-7, FM 21-40
- (4) Par. 6-11, 13, Protection Against Gas
- (5) Part II, Chemicals in War (Prentiss)
- (6) Chapters III-VI, IX-XI, Gas Warfare (Waitt)
- (7) Pages 9-13, also Chap. II, Sections A, B-I, III, C, War Gases (Jacobs)
- (8) Course Outline

METHODS OF DETECTION AND SAMPLING, GENERAL

Location: Lecture room with demonstration table

Length of Period: 50 minutes

Texts: (Student)

- (1) Chapter III, Section VIII, Chapters IV and V, War Gases (Jacobs)

Preparation for Period:

- (1) Arrange a display of equipment for sampling and analysis.
- (2) Provide several jars containing samples contaminated with mustard, lewisite, phosgene and chlorpicrin.
- (3) Have detector kit, paper, block painted with paint, crayon.

Instructor's References:

- (1) Par. 127 FM 21-40, Defense Against Chemical Attack
- (2) Chapters III-VI, War Gases (Jacobs)
- (3) Chemical Warfare Technical Bulletin, No. 5-7-1, Methods and Equipment for the Detection of Vesicants

Procedure during Period:

- (1) Follow conference notes on sampling procedures.
- (2) Explain and demonstrate the use of the various test equipment.

Special Announcements: This subject will be continued in the next period.

METHODS OF DETECTION, SPECIAL

Location: Lecture room with demonstration table

Length of Period: 50 minutes

Texts: (Student)

- (1) Chapter III, Section VIII, Chapters IV and V, War Gases (Jacobs)

Preparation for Period:

- (1) Arrange a supply of chemical agents for use in demonstrating test reactions.
- (2) Have on hand reagents, test papers and necessary apparatus for demonstration of test reactions.
(This may advantageously be assembled in the form of a "Test Kit for Gas Reconnaissance Agents.")

Instructor's References:

- (1) Chapters III-VI, War Gases (Jacobs)
- (2) Chemical Detection of War Gases for Civilian Defense (Bradley) Pages 893-896, Chemical and Engineering News, July 25, 1942
- (3) The Detection of Small Quantities of War Gases (Hoogeveen) Chem. and Ind. 59:550 (1940)

Procedure during Period:

- (1) Explain equipment and nature of the tests.
- (2) Give limitations and interfering substances.
- (3) Demonstrate equipment to the class using reactive chemicals.

GAS ATTACKS ON CIVILIANS

Location: Lecture room

Length of Period: 50 minutes

Texts: (Student)

- (1) Chapter I, Chapter II, Section 3, Protection Against Gas
- (2) Chapter XVI, Gas Warfare (Waitt)

Preparation for Period: None

Instructor's References:

- (1) Chapter XVI, Gas Warfare (Waitt)
- (2) Chapter XIII, Chemicals in War (Prentiss)
- (3) Chapter I, Sections III and IV, FM 21-40, Defense Against Chemical Attack
- (4) Chemical Warfare Miscellany, Pamphlet No. 6, Chemical Warfare School

Procedure during Period:

- (1) Follow Course Outline

PREVENTION OF GAS PANIC

Location: Lecture room

Length of Period: 30 minutes

Texts: (Student) None

Preparation for Period: None

Instructor's References:

- (1) Wartime Panic and Its Prevention (La Piere)
- (2) Panic Prevention (Brighthouse)

FIRST AID AND SELF AID

Location: Lecture room

Length of Period: 25 minutes

Texts: (Student)

- (1) First Aid in the Prevention and Treatment of Chemical Casualties, January 1943

Preparation for Period: None

Instructor's References:

- (1) First Aid in the Prevention and Treatment of Chemical Casualties, January 1943

Procedure during Period:

- (1) Follow Course Outline

DECONTAMINATION

Location: Lecture room

Length of Period: 25 minutes

Texts: (Student)

- (1) Par. 58-62, Protection Against Gas
- (2) Handbook for Decontamination Squads

Preparation for Period: None

DECONTAMINATION (Cont.)

Instructor's References:

- (1) Chapter 6, FM 21-40, Defense Against Chemical Attack
- (2) TM 3-220, Decontamination Materials and Equipment
- (3) Chemical Warfare School Pamphlet No. 12, 1942, Decontamination
- (4) Par. 58-62, Protection Against Gas
- (5) Handbook for Decontamination Squads
- (6) Operations Letter No. 42 and Supplement No. 1
- (7) Pages 572-78, 581-5, Chemicals in War (Prentiss)
- (8) Chapter VII, War Gases (Jacobs)

Procedure during Period:

- (1) Follow conference notes

CLEANSING STATIONS

Location: Lecture room

Length of Period: 50 minutes

Texts: (Student) None

Preparation for Period: None

Instructor's References:

- (1) First Aid in Prevention and Treatment of Chemical Casualties, January 1943
- (2) Operations Letter No. 124, Gas Cleansing Stations

Procedure during Period:

- (1) Follow Course Outline

ISSUE, CHARACTERISTICS AND FITTING OF MASKS

Location: Classroom

Length of Period: 50 minutes

Texts: (Student) Par. 26-32, Protection Against Gas

Preparation for Period:

- (1) Have masks ready for issuance to students.
- (2) Arrange for assistant instructors to assist in fitting masks.
- (3) Arrange for charts showing construction and functioning of masks.

ISSUE, CHARACTERISTICS AND FITTING OF MASKS (Cont.)

Instructor's References:

- (1) Protection Against Gas
- (2) Chapter 2, Section II, Chapter 5, Sections I-VI, FM 21-40, Defense Against Chemical Attack
- (3) WPB General Limitation Order L-57, 3/3/43, with amendment 1, 10/20/42

Procedure during Period:

- (1) Issue one gas mask to each student and obtain a memorandum receipt.
- (2) With students handling and looking at their masks (but not wearing them) the instructor then names and explains the parts of the mask and the purpose of each part.
- (3) In the closing part of the period, each mask is fitted to the student's face; the instructor giving only the part of the gas mask drill necessary to show the students how to don the mask and secure a gas-tight fit. (Assistant instructors aid the students when necessary.)

Special Announcements: Students should be instructed to retain masks (and properly safeguard them) for the remainder of the course.

CARE, STORAGE AND STERILIZATION OF MASKS

Location: Classroom

Length of Period: 25 minutes

Texts: (Student)

- (1) Par. 31-32, Protection Against Gas
- (2) Your Gas Mask

Preparation for Period:

- (1) Have rags and disinfectants (formaldehyde, Zephiran, Roccal) for disinfection.
- (2) Have classroom assistants.

Instructor's References:

- (1) Par. 85, 91, 98, 108-112, FM 21-40 (1942), Defense Against Chemical Attack
- (2) Sections VI-VIII, TM 3-205 (1941), The Gas Mask
- (3) Par. 31-32, Protection Against Gas

Procedure during Period:

- (1) Outline, and impress upon the student the necessity of proper care of the mask.
- (2) Explain, with demonstration, the proper procedure for disinfecting the mask.
- (3) Demonstrate the procedure for inspecting the mask indicating special points where damage is most likely to be found.

GAS MASK DRILL

Location: Open area, indoors or outdoors

Length of Period: 25 minutes

Texts: (Student)

- (1) Par. 32, Protection Against Gas

Preparation for Period: Arrange for (1) Drill area
(2) Assistants

Instructor's References:

- (1) FM 21-40, Defense Against Chemical Attack
- (2) Protection Against Gas

Procedure during Period:

- (1) Arrange class in drill area so each student has plenty of freedom and so each can see instructor and assistants.
- (2) As the instructor slowly and distinctly describes the steps of the gas mask drill, the assistant demonstrates each step.
- (3) Students then go through each step, as directed, with assistant instructors giving any necessary help and checking accuracy of the students' compliance with instruction.
- (4) After accuracy has been emphasized, part 3 is repeated for balance of period, to begin development of speed.

ORGANIZATION OF GAS DEFENSE

Location: Lecture room

Length of Period: 50 minutes

Texts: (Student)

- (1) Operations Letter No. 91
- (2) Operations Letter No. 104
- (3) Operations Letter No. 109

Preparation for Period:

- (1) Texts should be distributed and read before lecture.

Instructor's References:

- (1) Operations Letter No. 91
- (2) Operations Letter No. 104
- (3) Operations Letter No. 109

Procedure during Period:

- (1) Instructor should comment at length on the organization of the recommended gas protection service and the duties of various services of the Citizens Defense Corps.
- (2) The latter part of the period should be devoted to answering questions raised by students.

BASIC CIVILIAN DEFENSE ORGANIZATION

Location: Lecture room

Length of Period: 50 minutes

Texts: (Student)

- (1) Staff Manual: U. S. Citizens Defense Corps
- (2) Organization Outline for Local Defense Councils
- (3) Regulation No. 3, U. S. Citizens Defense Corps, as amended August 1942
- (4) Official Civilian Defense Insignia, U. S. Citizens Defense Corps
- (5) Operations Letter No. 42 and Supplements Nos. 1 and 2

Preparation for Period:

- (1) Distribute above texts to students well in advance to permit study.
- (2) Announce to students why texts are being distributed.

Instructor's References:

- (1) Organization Outline for Local Defense Councils
- (2) Official Civilian Defense Insignia, U. S. Citizens Defense Corps
- (3) Forest Fire Fighters Service
- (4) Join Your Civil Air Patrol
- (5) Operations Letter No. 70, Evacuation Service
- (6) Handbook for the United States Citizens Service Corps
- (7) Staff Manual: U. S. Citizens Defense Corps
- (8) Regulations No. 3, U. S. Citizens Defense Corps, amended to August 1942
- (9) Map, U. S. Office of Civilian Defense, Regional Offices
- (10) Operations Letter No. 76, Creation of Emergency Welfare Service of U. S. Citizens Defense Corps
- (11) Operations Letter No. 42, Decontamination Services
- (12) Operations Letter No. 42, Supplement 1, Functions of Chiefs of Emergency Medical Service and Health Departments in connection with Decontamination
- (13) Operations Letter No. 91 (Operations Letter No. 42, Supplement 2), Appointment, Duties, and Qualifications of State Gas Consultants and Senior (Local) Gas Officers
- (14) Medical Division Memorandum No. 14, Relation of Emergency Medical Services to Industrial Plants

Procedure during Period:

- (1) Follow Course Outline

GAS RECONNAISSANCE EXERCISE

Location: A field reasonably isolated

Length of Period: 120 minutes

Texts: (Student) None

Preparation for Period:

- (1) Prepare field for incidents the preceding day.

Procedures during Period:

Situations:

- (1) Three HS bombs have been dropped. The warden making a report has overlooked one bomb. Problem: Detect warden's error.
- (2) Warden has reported gas and sounded gas alarm. No gas is present. Solution: Determine the absence of gas.
- (3) Warden reports presence of a persistent gas, although a nonpersistent gas was used. Solution: Correct identification of gas used.
- (4) Warden has requested two decontamination units for gassed area. Correct estimate of the situation shows one unit is sufficient. Solution: Determine extent of gassed area, and correctly estimate decontamination units needed.
- (5) The decontamination squad reports that a gassed area has been completely decontaminated. Solution: Find HS overlooked by decontamination unit.
- (6) HS has been sprayed. Estimate the approximate area involved by means of detector painted surfaces and detector crayon.

In solution of the above situations the principal problems are the location of gas and the determination of whether or not gas has been used.

Only the warden's report should be given to the class.

GENERAL GAS PROTECTION

Location: Classroom

Length of Period: 25 minutes

Texts: (Student)

- (1) Protection Against Gas
- (2) Chapters XIII and XIV, Gas Warfare (Waitt)

GENERAL GAS PROTECTION (Cont.)

Preparation for Period:

- (1) Obtain for demonstration, one suit of protective clothing, impermeable.

Instructor's References:

- (1) Chapters XIII and XIV, Gas Warfare (Waitt)
- (2) Par. 35, 114-21, FM 21-40, Defense Against Chemical Attack
- (3) Pages 564-585, Chemicals in War (Prentiss)

Procedure during Period:

- (1) Follow Course Outline

TREATMENT OF CONTAMINATED SUPPLIES

Location: Lecture room

Length of Period: 25 minutes

Texts: (Student)

- (1) Chapter III, War Gases (Jacobs)

Preparation for Period: None

Instructor's References:

- (1) Par. 129, 130, Tables--Pages 7-11, FM 21-40, Defense Against Chemical Attack
- (2) Appendices II and III, TM 8-285, Treatment of Casualties from Chemical Agents
- (3) Chapters III, VII, War Gases (Jacobs)
- (4) Pages 584-5, Chemicals in War (Prentiss)

Procedure during Period:

- (1) Consideration of the effects of various agents on water and food supplies
- (2) Elaboration of methods of purification of such supplies resulting in their salvage

CONTROL CENTER

Location: Classroom

Length of Period: 25 minutes

Texts: (Student)

- (1) The Control System of the Citizens Defense Corps, U. S. Office of Civilian Defense

Preparation for Period: None

CONTROL CENTER (Cont.)

Instructor's References:

- (1) The Control System of the Citizens Defense Corps,
U. S. Office of Civilian Defense

Procedure for Period:

- (1) Follow Course Outline

GAS CHAMBER EXERCISE

Location: Gas Chamber

Length of Period: 1 hour

Texts: (Student) None

Preparation for Period:

- (1) Have a safety officer and several enlisted men on hand to assist.
- (2) Have on hand the following:
 - (a) CN capsules
 - (b) Can perforated to serve as generator (Fig. 91, FM 21-40, 1942)
 - (c) Candles
 - (d) Wooden blocks or bricks for can
 - (e) Matches
- (3) Be sure all personnel have been previously equipped with masks.

Instructor's References:

- (1) Par. 107, FM 21-40 (1942)
- (2) Page 77, War Gases (Jacobs)

Procedure during Period:

- (1) Follow "Phase I" Par. 107 d, FM 21-40 using one capsule of CN per 1000 cubic feet of space, (rather than 100 cubic feet of space, as erroneously stated in FM 21-40) emptying the capsule on to the top of the generator.
- (2) Follow "Phase II" of reference.
- (3) Follow "Phase IV" of reference.

GAS IDENTIFICATION (KNOWNNS)

Location: Convenient field

Length of Period: 25 minutes

Texts: (Student) None

Preparation for Period:

- (1) Make arrangements for police surveillance to insure privacy.
- (2) Prepare boxes for exploding detonation sets.
- (3) Appoint safety officers to insure protection of students.
- (4) Have first aid materials in readiness.

Instructor's References:

- (1) Chapter I, FM 21-40, Defense Against Chemical Attack

Procedure during Period:

- (1) Explode tubes containing phosgene, lewisite, mustard and chlorpicrin and have students note odors, telling the students in advance what gas to expect.

GAS IDENTIFICATION (UNKNOWNNS)

Location: Convenient field

Length of Period: 25 minutes

Texts: (Student) None

Preparation for Period:

- (1) Make arrangements for police surveillance to insure privacy.
- (2) Appoint safety officers to insure protection of students.
- (3) Have first aid materials in readiness.

Instructor's References: None

Procedure during Period:

- (1) Pass out blank slips for students.
- (2) Explode bombs and have students write down their identification of the gas.
- (3) Upon conclusion have students check their lists by telling them what gases were used.

DECONTAMINATION EXERCISE

Location: Convenient field

Length of Period: 25 minutes

Texts: (Student) None

Preparation for Period:

- (1) Have four men dressed in protective clothing.
- (2) Have decontaminating equipment available.

Instructor's References:

- (1) Chapter 6, FM 21-40, Defense Against Chemical Attack

Procedure during Period:

- (1) Demonstrate decontamination by hand and with portable sprayer.

CONTROL CENTER EXERCISE

Location: Classroom

Length of Period: 50 minutes

Texts: (Student)

- (1) The Control System of the Citizens Defense Corps,
U. S. Office of Civilian Defense

Preparation for Period:

- (1) Arrange space and furniture to simulate control center.
- (2) Prepare incident slips to pass out to students.

Instructor's References: Same as students.

Procedure during Period:

- (1) Select students to fill places at control table and act as personnel of the Control Center.
- (2) Have student report incident and route through the Control Center.
- (3) Criticize the report and directions sent out by Control Center.



